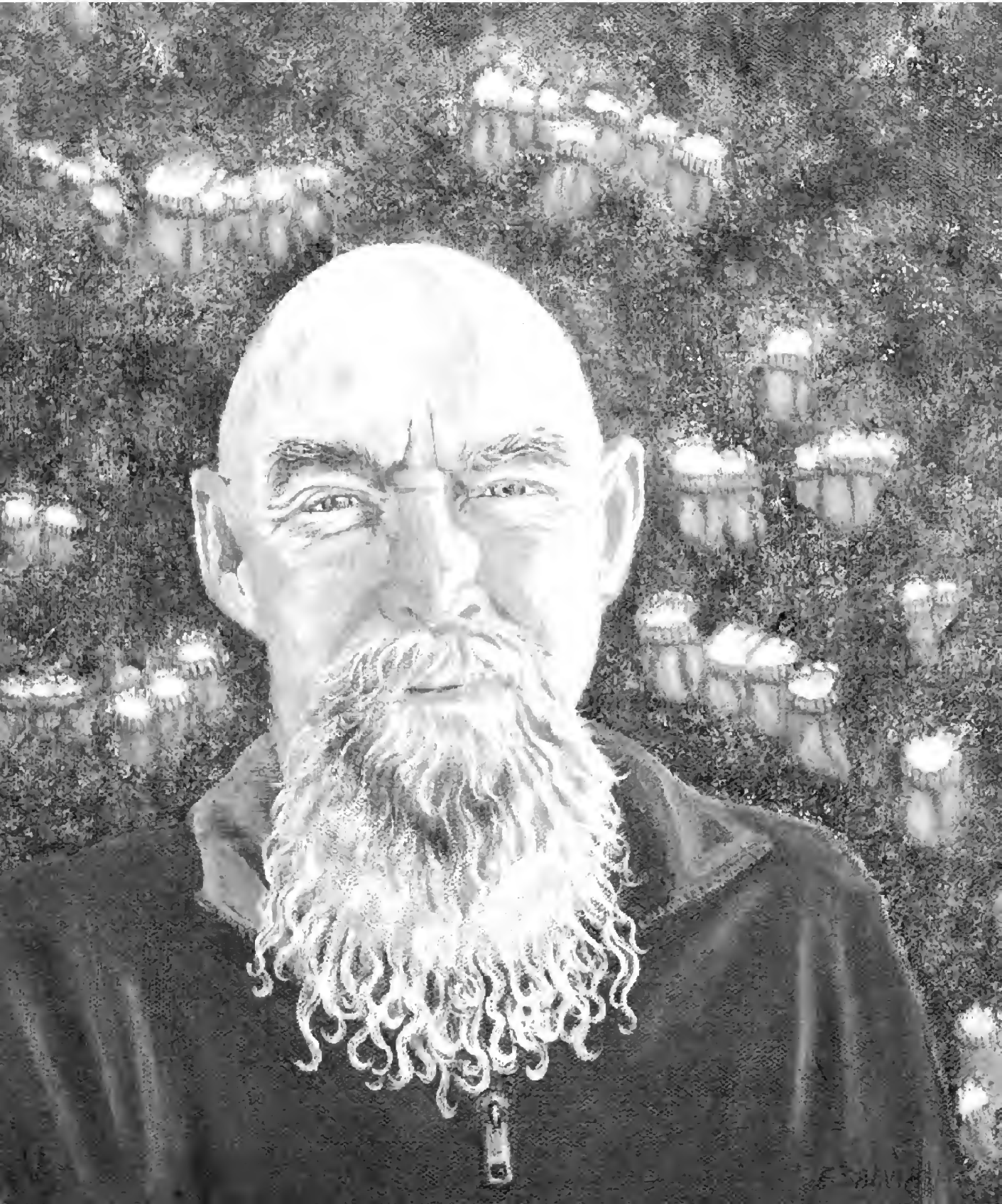


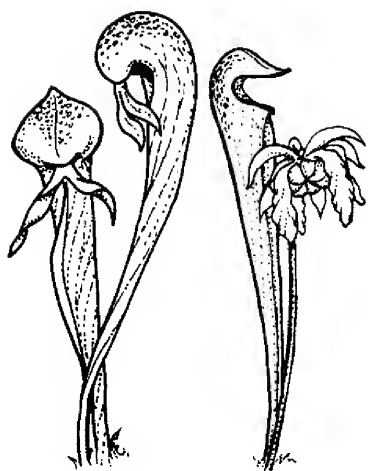
CARNIVOROUS PLANT NEWSLETTER

Journal of the International Carnivorous Plant Society

Volume 43, No. 4

December 2014





CARNIVOROUS PLANT NEWSLETTER

Journal of the International
Carnivorous Plant Society
www.carnivorousplants.org

Volume 43, Number 4
December 2014



Front Cover: Portrait of Phill Mann by Beth Salvia. Article on page 112.

Back Cover: *Drosera mannii* flower and plant. Photos by Richard Nunn along the Albany Highway, Western Australia. Article on page 112.

Carnivorous Plant Newsletter is dedicated to spreading knowledge and news related to carnivorous plants. Reader contributions are essential for this mission to be successful. Do not hesitate to contact the editors with information about your plants, conservation projects, field trips, or noteworthy events. Advertisers should contact the editors. Views expressed in this publication are those of the authors, not the editorial staff.

All correspondence regarding dues, address changes and missing issues should be sent to the Membership Coordinator at the ICPS. Do not send such correspondence to the editors. Checks for subscriptions should be made to the International Carnivorous Plant Society in US funds. Dues, including a subscription, are \$30 per year.

International Carnivorous Plant Society, Inc.
2121 N. California Blvd., Suite 290
Walnut Creek, CA 94596-7351, USA
icps@carnivorousplants.org

President
Secretary/Treasurer
Board Member
Board Member
Board Member
Board Member

Administrator
Membership Coordinator
Seed Bank Manager

CPN Editors
Managing Editor
Editor
Editor
Science Editor
Science Editor

Marcel van den Broek, marcel@carnivorousplants.org
Richard Myers, richard@carnivorousplants.org
Greg Bourke, Conservation Director, greg@carnivorousplants.org
Richard Nunn, richardnunn@carnivorousplants.org
Jan Schlauer, Cultivar Registrar, jan@carnivorousplants.org
Bob Ziemer, bob@carnivorousplants.org

Cindy Slezak, cindy@carnivorousplants.org
Brent Jones, brent@carnivorousplants.org
John Brittner, john@carnivorousplants.org

editor@carnivorousplants.org
Bob Ziemer
Barry Rice
Djoni Crawford
Fernando Rivadavia
Jan Schlauer

Date of effective publication of the September 2014 issue of Carnivorous Plant Newsletter: 27 August 2014.

The ICPS is the International Cultivar Registration Authority (ICRA) for the names of cultivated carnivorous plants according to the International Code of Nomenclature for Cultivated Plants. Send relevant correspondence to the ICPS, Inc.

Carnivorous Plant Newsletter is published quarterly in March, June, September, and December by the ICPS, Inc., 2121 N. California Blvd., Suite 290, Walnut Creek, CA 94596, USA. Periodicals postage paid at Richmond, CA and additional mailing offices. Postmaster: Send address changes to ICPS, Inc., 2121 N. California Blvd., Suite 290, Walnut Creek, CA 94596, USA. Printed by Allen Press, Inc., 810 E. 10th Street, Lawrence, KS 66044. Logo and masthead art: Paul Milauskas. © 2014 International Carnivorous Plant Society. All rights reserved. ISSN #0190-9215

CONTENTS

In memory of Phillip James Mann (1951-2014)-----	112
The Rehder Boys-----	125
Variation in <i>Drosera pygmaea</i> -----	130
Pygmy sundews – propagation and cultivation -----	132
New cultivars -----	135

11TH ICPS CONFERENCE 2016

CALL FOR PROPOSALS

After the successful and exciting conference in Cairns, Australia, it is about time to begin thinking about the next ICPS conference scheduled for 2016. According to the principle of fair global distribution and the set schedule, the next venue should preferably be located in Europe/Africa/Middle East.

If you or your society feels this should be your turn, please send a proposal by email to marcel@carnivorousplants.org. Your proposal should be received by the 15th of March 2015.

Please supply in your proposal information about the person/society (with contact details, preferably email) who would like to organize the conference, the intended venue (capacity, equipment), travel details, accommodation, field trip opportunities, and any ideas you find useful to assist the ICPS board of directors to select your proposal.

Please understand that, while potentially interesting from a theoretical perspective, proposals without a direct (personal) commitment to organize a conference cannot be accepted for serious consideration (or further discussion) by the board.

The ICPS is prepared to distribute information on the forthcoming event to its members and, if requested, monetary support to cover advance expenses can be loaned. The conference should, however, be economically self-sustained so the initial financial support by the ICPS can be reimbursed so funds will then be available for subsequent conferences.

If you have any questions about what should be in a proposal or have questions about what to expect when you try to set up for a conference you can ask your questions by e-mail to marcel@carnivorousplants.org. A “Conference-manual” containing tips, tricks, and hard-earned experience of those who organized preceding conferences is available to help you along the way.

Thank you very much for your consideration.

Marcel van den Broek
President, ICPS
marcel@carnivorousplants.org

IN MEMORY OF PHILLIP JAMES MANN (1951-2014)

RICHARD NUNN • Singapore • Richardjnunn1@gmail.com

Phill Mann (Fig. 1 and Front Cover) was one of the pioneers of the world-wide increase in interest in carnivorous plants in the 1970s and leaves a huge legacy for enthusiasts the world over. In his teens, Phill worked as a Student of Horticulture at Kings Park and Botanic Gardens, where he gained an outstanding knowledge of the native plants of Western Australia. This started his life-time interest in discovering, photographing, and cultivating the native plants of Western Australia, with a particular passion for the carnivorous plants of his home state. He was responsible for establishing *Cephalotus follicularis* widely in cultivation, distributing many new *Nepenthes* species through his part time nursery Southern Carnivores, describing *Drosera gibsonii* (Fig. 2), the original description for *Nepenthes sibuyanensis*, and has a taxon named after him, *Drosera mannii* (Back Cover). Phill, through extensive field work, discovered many of the Australian *Drosera* new to science over the past 30 years that have subsequently been described. He had an extensive international network of friends who he conversed with, visited, and proudly showed the carnivorous plants of south west Western Australia.



Figure 1: Phill Mann with a plant of *Nepenthes rowanae* at Jackey Jackey, Queensland. Photo by Richard Nunn.

It was only March this year that Phill, Allen Lowrie, and I had a great field trip to Phill's beloved south west corner of Western Australia. The two elder statesmen of Australian carnivorous plants were in fine form, regaling stories of years gone by, enjoying the obligatory field trip junk food, and giving me a hard time for just about anything and everything. That's the last time I saw Phill and he was full of energy, vigorous, and his dry wit in fine touch, and that's the image of Phill that will stay with me. We always spoke every couple of weeks by phone and most years would do between 6 and 10 field trips. We were great mates and I am sad to see him leave us all too soon.

I got into carnivorous plants in about 1980 as a school kid and first heard of Phill through Adrian Slack and Allen Lowrie's books, and also through the ICPS. Starting University, work, moving cities, getting married, took me away from carnivorous plants for about a decade, but in 1997, having never lost the interest, I got back into them and one of the first people I made contact with was Phill. The first purchase I made from Southern Carnivores was a tiny seedling of *Nepenthes villosa*. I remember at the time Phill telling me to save my money, they were expensive as only a few made it out of TC and Phill was embarrassed to put the \$75 price tag on them. I mention this story because it sums up the type of person Phill was. He didn't run his nursery to make money, it was more about the plants, the hobby, and getting them out to people at a price that he thought was fair. That *N. villosa* is still alive today. He was always generous with his advice and we spoke a lot on the phone and quickly developed a good rapport.

When Phill found out I used to travel to Perth for work, he asked me to come and visit him and offered to show me a few sites. I remember walking into his greenhouse for the first time, he had a fantastic *Nepenthes* collection, and I was speechless at some of the mature plants of species just unavailable in Australia at the time. That afternoon he took me to a few, what he called tourist sites, and we saw some stunning *D. stolonifera* and *D. gigantea*. Phill and I quickly found a common interest in getting out in the field and photographing Australia's carnivorous plants. I have lost count of how many trips we made in Western Australia, we even went to Cape York, Singapore, and made a trip to the US in 2012. Standout trips included finding *D. browniana* after 6 failed attempts, climbing up Bluff Knoll to see *D. monticola*, and discovering *D. gibsonii* on the same day, and visiting a huge stand of *Darlingtonia* with Barry Rice and Beth Salvia. I didn't get to go on the early trips to the Philippines, Peninsula Malaysia, and Borneo with Phill, but he used to speak fondly of those trips and his passion for *Nepenthes*. A highlight for Phill was the *Nepenthes* Summit in Kuching in 2007,



Figure 2: *Drosera gibsonii*, discovered and named by Phill Mann. Photo by Richard Nunn in Stirling Ranges National Park, Western Australia.



Figure 3: Phill showing the crowd a lizard during the post ICPS conference field trip in Western Australia in 2008. Photo by Allen Lowrie.

which would be his last visit to Borneo. It would not be uncommon for us to drive 1500 km on a three-day trip around Western Australia, and over the years spending that much time with Phill, we became very close friends and I count myself fortunate to really get to know Phill well. We would spend hours talking about all sorts of things, mainly plants, but lots of other topics as well.

So how best to sum up Phill? Although growing up in Perth, Phill spent most of his adult life working in the Western Australian Police Force and living in regional Western Australia, Phill loved the country life, the people, and the close sense of community. He knew the bush well, had an immense knowledge of the local flora and fauna and a close connection with the unique habitats in south west Western Australia (Fig. 3). Phill was a very understated, humble person and many people would not be aware that through his travels he first discovered many of the Australian pygmy and tuberous *Drosera* that were subsequently described in the 1980s and after. Not one to suffer fools, Phill could be a grumpy old bugger at times, but always with a heart of gold, he would do anything for anyone. His sense of humour and dry wit were just about always on display, the more he teased you, generally the more he liked you. Years in the police force had given Phill a window into many facets of life, good and bad, and shaped his personality into someone with no pretense, hard but fair, practical, and a strong sense of right and wrong. He was brave with a fighting spirit, having survived previous battles with ill health that would have finished most people off. These bouts of ill health had slowed Phill down a bit and made him more susceptible to illnesses, and in the past few years I witnessed him fight bravely with diabetes. Most recently he needed bypass surgery and unfortunately post operative complications and infection finally presented him with a hurdle he couldn't get over. Phill is survived by his wife Min, and children Leah and Brayden.

In putting this memorial together I have collated reflections on Phill's life from some of his closest friends in the carnivorous plant world.

In Memory of Phillip James Mann by Allen James Lowrie

I have known Phill for around 40 years since we were very young men. We even shared the same middle name James. Phill lived in Bedford, a suburb of Perth across the road from another Australian carnivorous plant pioneer and friend Steve Rose.

Over many years Phill and myself have undertaken many botanical expeditions together throughout the south west of Western Australia (Fig. 4). Phill was a man of extraordinary detailed knowledge on all things associated with the wilds of Australia. His knowledge of the geology of the landscape and the associated flora with which carnivorous plants grow, including the animals and insects that are found living amongst them, was just outstanding. He was a living encyclopedia on all these things.

Phill's interests were not just of all the land living life forms but also those of our oceans too. His knowledge of the sea and all its creatures and his love of rock and beach fishing was exceptional. This same knowledge also extended to the aquatic life forms found in the freshwater swamps, lakes, and streams of our south west Australian land-based water ways as well.

Phill's sense of humour too was just outstanding and he has had me in stitches of laughter on numerous occasions. From his humorous wise cracks in the bush and his fantastic hilarious yarns at the end of the day over 1 or 5 beers were just good fun and joy. Phill was also a great practical joker



Figure 4: Richard Nunn, Allen Lowrie, John Yates, and Phill Mann (left to right) in the Stirling Ranges National Park, Western Australia. Photo by Maggie Lin.

and you were never sure when the next practical joke was going to arise at someone's expense. I will never forget one particular occasion many years ago where Phill excelled in this practice and I was the "bunny in the head lights" for his fun loaded dastardly deed.

It was a Saturday and Phill was to finish his shift as one of the local Mount Barker policemen at noon where he would join up with me to go off on another botanical trip together over the next 3 days, towards the Esperance region and beyond from Phill's Mount Barker home.

While I was waiting for Phill, I headed for the summit of Mount Barker, to which it is possible to drive up to its top because it is home to a radio relay station and aerial. The summit has a number of carnivorous plants on it as well as some very nice Triggerplants. I decided to photograph whatever I saw that was interesting while I waited for Phill to finish his shift.

It was about noon...I was laying prostrate on the gravelly ground near the summit of Mt. Barker photographing a pygmy *Drosera*... focusing my subject through the eye-piece of my pre digital era "steam powered SLR tripoded slide camera" ...I was in a state of extreme concentration trying to get focus and the shot...when all hell broke loose!

From a period of extreme peacefulness with the birds singing and a gentle breeze whispering through the trees and bushes to a frightening and deafening We-Hoo...We-Hoo... police pursuit sirens at full blast and blaring their ear piecing noise at about 120 decibels straight into my brain and frightened the living day light out of me ...as I sprang to my feet from my prostrate position on the ground like I had been hit with a sudden lightning bolt of electricity. I almost died of fright!

As I jumped up...my heart was racing and all sorts of emotions were rushing over me and out the corner of my eye I could see Phill doubled up with belly laughter at what he had pulled off at my expense... Phill had quietly rolled his police pursuit vehicle (with the motor off) to within a few meters of me without me hearing him when he put on his police sirens at full blast!...when I had composed myself I called him every (not very pretty) expletive I could muster at the time while Phill continued doubling up and laughing...I eventually calmed down and I admitted to Phill that he had just pulled off an epic practical joke that should go into the Guinness Book of Records as a classic.

Along with all the great fun we had, Phill and I had a great friendship and botanical and natural history relationship. It was an absolute pleasure to have Phill in my life. I will never forget him and I will miss him greatly.

Memories of Phill Mann by Richard Sivertsen

Steve Rose first introduced me to Phill Mann back in the early 1970s when CPN had just first got started, and the new members had their mailing addresses posted. I wrote to Steve and exchanged a wealth of information, and he suggested that I contact Phill. This was before email, PMs, and Facebook, and the only communication we had was by writing letters, sometimes aerogramme and post cards. Steve mentioned that he and Phill were only interested in the native carnivorous plants, ferns, and orchids, and didn't have too much interest in the other exotic CPs. I gathered up some photos of *N. rajah*, *N. lowii*, *N. villosa*, *N. veitchii*, *N. maxima*, *N. dyeriana*, and a few others and sent it to Steve, and asked him to bring it to Phill, who lived nearby. They were both intoxicated by them, and went on several missions to Borneo, Malaysia, Philippines, and Papua/New Guinea where Steve managed to find the elusive *N. paniculata*; he had an uncanny ability to find rare and hard to find plants. Steve went off on some prospecting and became difficult to contact, and I never heard from him since.

One day in the mid-1980s, while I was living in Cuddebackville, NY, I had just come home from work, and the phone rang. I heard someone with a thick Aussie accent, saying that he was Phill,

and his wife Min, asking me to pick him up from the Newark International Airport! He said it was just a spur of the moment decision. I hopped in the car and drove as fast as I could and met them and brought them to my house. It was some time in the middle of January and we had some four inches of snow on the ground. Phill insisted I take him up to Big Pond to see the carnivorous plants there. I told him that all he would be able to see is lots of snow and ice, the plants are all dormant and buried under the snow. He didn't care! He still wanted to see the site! So I drove him up a steep trail, and he had a walk around. My car got stuck in the snow on our way out, and he had to get out and push my car out of the snow, and got a face full of it from the rear tires. Later, I took him and my son skiing in one of our local resorts. He seemed to enjoy that, being that neither he nor Min had ever seen or experienced snow before! He even made a few snowballs and we built a snowman out on my driveway. He showed me several photo albums of Australian CPs, tuberous *Drosera*, pygmy *Drosera*, some new species, still unnamed. I asked him if he was going to publish these things, and he said, he would give it to someone else for their PhD; an amazingly generous man. He also got to see my own greenhouse packed with mostly *Nepenthes*, plus a bunch of seedlings I had in the basement from the Turnbull-Middleton expeditions, most of them new to cultivation.

A few years later, I went through a divorce and custody struggles, and dropped out of the CP circles and got rid of all my plants for about a decade. But when I knew things were going to finally work out in my favor, I decided to get back into it all again, and got back in touch with Phill. We exchanged emails, which made communication a lot easier. He told me he has a small *Nepenthes* nursery and TC business going, and that things were quite well for him. A few weeks later, I got a nice parcel from Phill, with an instant collection of *Nepenthes* to jump start my collections again.

He told me he dropped out of the circles too for a while with a bout of lung cancer, which took about a year to recover fully, but was now back full swing raising a couple kids with Min, and growing some great plants.

I met up with Phill and Richard Nunn at the 2012 ICPS convention in New England, and I took them to the New Jersey Pine Barrens afterward. We all had a decent time, and we had a few beers afterwards at the Marriot by the Newark International Airport. Thanks for all the happy memories, Phill!

Memories of Phill Mann by Robert Gibson

I had the great privilege to have got to know Phill and his family since 1994. This gave me a great opportunity to travel with Phill to various parts of the south west of Western Australia to see a large number of carnivorous plants in the wild, or in his "back yard" as he used to call it. Phill knew this part of the region well and has been responsible for the recognition of many taxa, particularly sundews as being new to science (including plants later described as *D. × carbarup*, *D. menziesii* subsp. *basifolia*, and *D. prostratoscaposa*). His work and hobby in hunting pigs had contributed to Phill getting to many out-of-the-way places; for example he explained to me that during his time as a police officer he was involved in a number of stake-outs in different parts of the state. And during such events – which often took prolonged periods of time – he would use the opportunity to explore the botany of that particular area. Phill also had a job that involved reading the meters for an electricity provider of remote rural properties, which also gave him a chance to explore for plants.

Phill was very generous with his time and in sharing his knowledge and plants. During visits I recall having many discussions with him that went into the wee small hours, as we talked about a large range of topics. It was wonderful to visit Phill when travelling near Harvey and also in spending time with him in the field, where he never tired of sharing the places and plants that he loved.

Farewell Phill, your fascination with, and passion for, and knowledge of these amazing plants has been passed on to many people. Your legacy and memory will live on.

Memories of Phill Mann by Greg Bourke

I don't recall when I began corresponding with Phill, but it was sometime in the early 1990s. I met him for the first time in 1999 while I was on a month-long tour of the south west (of Australia). Phill showed me a few of his local carnivorous plant sites and gave me some vague directions to sites throughout the region. The following year I made another trip to Western Australia, this time Phill took a few days off work and travelled with me. We headed south, in search of *Cephalotus* (Fig. 5). This is something we would do a dozen times or more in the coming decade. These trips followed a recurring theme no matter which direction we travelled, I'd drop in to Phill's, check out his *Nepenthes* collection and talk the usual plant nerd talk. I'd then stay a night before we'd head off either in my hire car or one of his four wheel drive vehicles, although as the years passed he was more inclined to take his car as he couldn't tolerate my driving. We'd stop at the first services station out of town; I'd have a toasted bacon and egg sandwich and Phill, an iced coffee and a cheese sausage. We'd check out some sites before finding a pub to settle in for the night. We frequented the Ravensthorpe, Wongan Hills, and Mount Barker pubs for a period and the rotation of European and English bar staff provided much entertainment. The plants really took back seat on these trips after a few years.

2007 was a particularly memorable year. The *Nepenthes* Summit in Kuching. Phill and I stayed at the Singgahsana hotel, which at that point was like my second home. I don't remember much about the conference as I'm sure Phill didn't either. Again, the bar was the place to be from before sun down



Figure 5: Phill Mann at Coalmine Beach, with *Cephalotus follicularis*. This site is now virtually all gone as a result of poaching and erosion of the cliff face. Photo by Richard Nunn.

until sun up. It wasn't all hard work though; we did get out to see some *Nepenthes*. We made a drive to Bau in search of *N. northiana* on one of the days. I think it was the toughest trek we'd done. It must have been 300 m from the car to the plants up a slope of no more than 1 in 10. I'm sure we both regurgitated the Lok Lok consumed on the early hours of that day. I then proceeded to get the car bogged at the side of the road after seeing a roadside cutting covered in *N. rafflesiana*. "Don't stop here" Phill said, followed by "I'll steer and you push". Given it was my fault, I agreed and got out to push. As soon as I got behind the car, Phill dropped the clutch covering me from head to toe in mud, payback!

Phill's knowledge of *Nepenthes* and his skill at cultivating them was something I was always in awe of. Fortunately I learnt a few things from him and still cultivate some of the fantastic plants he introduced to cultivation. His knowledge of the flora of the south west was as good as anyone I have met. He introduced me to some of the best carnivorous plant sites on the planet recalling them all from memory. Most of all though, I'll remember Phill for his consumption of cheese sausages, iced coffee, and his disapproval of my reckless driving. The world of carnivorous plants and western Australia will not be the same without the Mann.

Memories of Phill Mann by Cindy Chiang

I would think everyone who knows Phill will remember him by his unique wicked or evil laugh. After my husband and I visited one of the *Cephalotus* sites with him, we found one fat blood-filled kangaroo tick back in our hotel room. When we (lifelong city dwellers) told him about it the next morning, Phill went "Oh, I forgot to mention that you need to check your privates when you shower after being in the outback ... it (spelled tick) very likely dropped off one of you ... muahahahaha ... muahahahaha..." Otherwise, you will remember him for his practical pranks. Soon after we arrived home in Singapore, I received an envelope of nicely packed desiccated kangaroo poo. On the note, Phill wrote "As we have discussed, these would be sufficient for you to try to get your *Cephalotus* growing well." But jokes and pranks aside, he is a great mentor and had taught me many things about carnivorous plants. Although plants die, they remain somewhat invincible. We gasped in horror when he was about trash the *Cephalotus* plants he had for sale as the species did not take well to shipping. He just gave us an incredulous look and proceeded to pull all the pitchers and yellowing leaves away (our screams in the background). In the end, he gave us a bagful of rhizomes and said, "Take them home, they are for free ... they'll grow anyway." And they did. Every time we met, he always had new knowledge to share. I will certainly miss that. Although Phill has passed on, he remains invincible too as he is irreplaceable in our hearts.

In Memory of Phill Mann by Rob Cantley

The Phill Mann I remember: Grumpy? – Maybe. Funny? – Yes! Generous and kind? – To a fault! Intrepid and adventurous? – Definitely! Quirky? – Heck yes, he collected bullets for heaven's sakes! Brave and strong? – More than we will ever know. Obsessive? – Well, you subscribe to this journal, so you don't need me to answer that.

Like others, I cannot recall exactly when I first started corresponding with Phill. It was back in the mid-1980s when I ran my first carnivorous plant nursery in Brunei, North Borneo called, enigmatically, ISRA Exotics. In those days, because of where I was located, I had a stream of visitors, amongst them a young Charles Clarke, seeing *Nepenthes* in the wild for the first time, Peter Anderson, Geoff Roberts, Wilf Cockin, Anthea Phillips, and very many others. All characters, but they truly broke the mold when they made Phill.

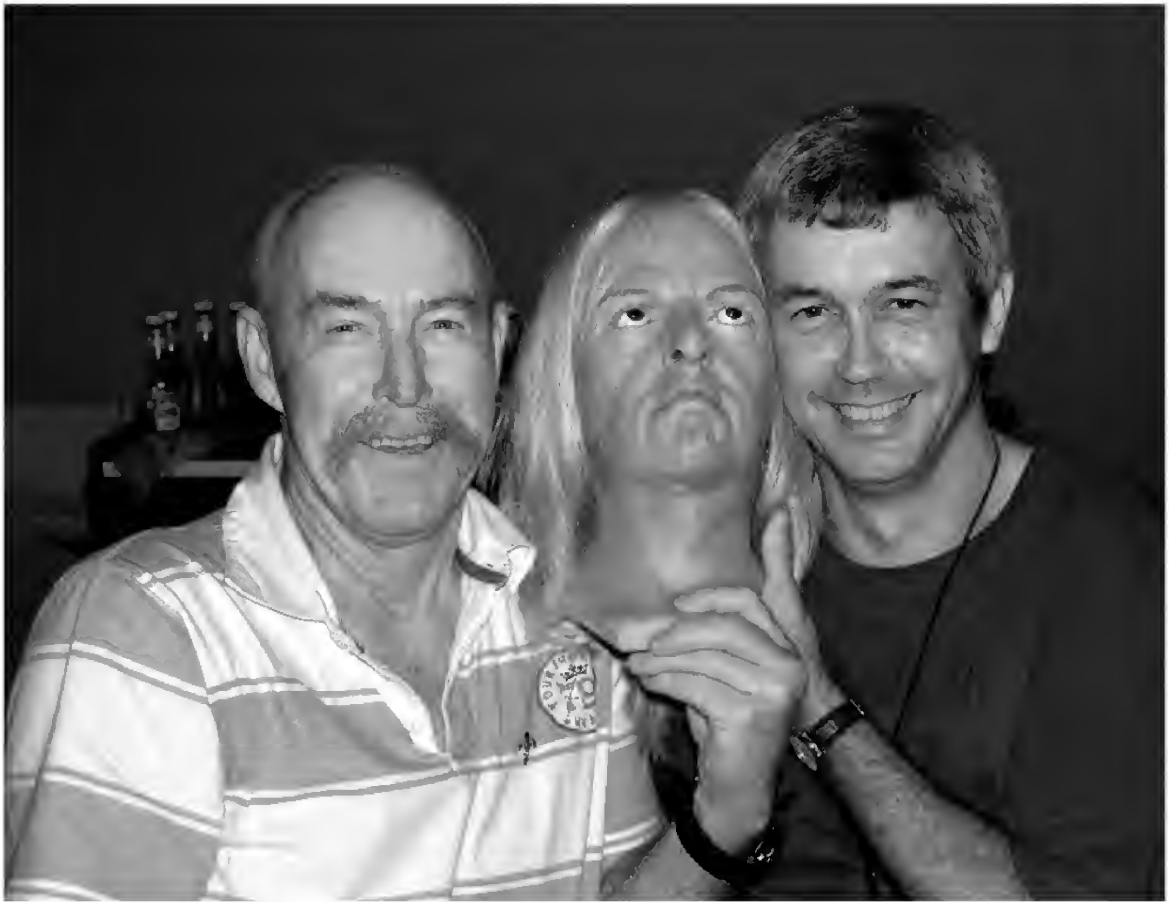


Figure 6: Phill Mann, Georg Eberhard Rumphius (1627-1702), and Rob Cantley at the Singapore Garden Festival 2008. Photo by Diana Williams.

A man of boundless enthusiasm, Phill was never happier than when grubbing around in some swamp looking for his favorite plants, so long as there was a cold beer somewhere at the end of the day. Many have made much of Phill's grumpiness but I never really noticed that. To me he was always good natured and kind. Perhaps I didn't notice the famous grumpy side, because I have spent so much time with Charles Clarke over the decades or maybe I am just as grumpy too – at times...

I dropped out of carnivorous plants for about 7 years in 1990 and lived in Hong Kong but Phill still kept in regular contact and through him and his old friend Thomas Alt, I could follow his amazing discoveries and exploits. Such as the time the Philippine Army used him for target practice in the ravines of Legaspi – how did they manage to miss him? Then I moved to Sri Lanka in 1997 to start a new company specializing in *Nepenthes* and along came e-mail and with it, a steady stream of news from Phill with dreams and aspirations galore. He dreamed many times of coming to Sri Lanka, which he would have adored but sadly, it was never to be – he would have loved it. Later on, as broadband became the norm, Phill would send endless jokes, some of which would have me roaring with laughter and others I couldn't hit the delete button fast enough, in case someone was looking over my shoulder. Then came SKYPE and right up until a few weeks before his passing, Phill would frequently call for a chinwag. If there's one thing Phill hated, it was losing touch with his friends. He would go to endless lengths to either visit them or have them visit him. In 2007, Diana and I spent a wonderful few days with him in Perth, our first visit to the quaint little island called Oz, which is populated by strange and wonderful people. Thanks to Phill and Min's generosity, we had an unforgettable experience. Phill picked us up from the airport and took us just everywhere

we wanted to go as well as some places we never dreamed existed. We declined the roo-shooting experience. Nothing was too much trouble for Phill. His boundless generosity extended to that most precious of all resources – time.

It was also on our 2007 trip to Perth that Phill’s exceptionally generous nature really came to the fore. We were looking through his tissue culture collection, making some exchanges when I noticed he had *Nepenthes villosa*, which at that time we also had but ours was a weak clone, which we had never really got going. When he learned that, Phill said “Go on Mate, take the lot, I can never establish it anyway”. Phill’s clone turned out to be exceptionally vigorous for such a slow species and if you have *Nepenthes villosa* from Borneo Exotics in your collection, take a fond look at it and thank Phill, for it was he who originally introduced your plant to cultivation.

In more recent years, Phill and I met in Singapore several times, starting in 2008 when he volunteered his time to help us set up our large exhibit at the Singapore Garden Festival (Fig. 6). Later we met just for fun and spent many, many, hours whiling away the night, dreaming of the future, until either they kicked us out of the bar or I gave up the unequal struggle to keep up with him. To tell the truth, I never knew until recently that his earlier illness had compromised his immune system to such an extent. He was occasionally ill and was hospitalized in Singapore during the Singapore Garden Festival build-up but we never worried too much. This was Phill, he would get better wouldn’t he? Phill just refused to acknowledge his mortality and lived life at 100 miles per hour. Had he stayed at home and done little, perhaps he would still be there today, but then he wouldn’t have been the Phill we knew and came to love.

Although I couldn’t make it to the funeral, Richard Nunn called me in the evening and Richard, I, Greg Bourke, and Allen Lowrie, separated by thousands of miles, simultaneously raised our glasses in a toast to Phill’s memory. It’s just what Phill would have wanted. It was a beautiful evening here in the highlands of Sri Lanka and sitting on my roof gazing at the sunset, I shed a few tears for the very special man with the kind heart and endless sense of fun. I’ll always miss him and without any doubt it was truly a privilege to have known that most complex of all complex Ozzies and the indomitable spirit of Phill Mann. May he rest in peace.

In Memory of Phill Mann by Diana Williams

My first encounter with Phill was in Kuching in 2007 at The *Nepenthes* Summit organized by Chi’en Lee, when Phill crept up behind me catching me off guard, as I was totally involved in placing a display specimen plant of *Nepenthes sibuyanensis* onto our exhibit (Fig. 7). I heard Rob’s voice in the background “Diana, meet Phill Mann who discovered that species” – “Wow, hello Phill!” I was astonished, as it was indeed an honour to meet the actual person who had come across this plant in its natural habitat. Something which I was struggling to present. Also the irony of the situation, that Phill should rock-up at that very moment. Phill immediately offered his assistance and we both got stuck into completing the display.

We were to go on to reach greater heights in the creation of *Nepenthes* displays, when at the Singapore Garden Festival in 2008 we got ‘stuck-in’ literally gluing on pebbles to



Figure 7: *Nepenthes sibuyanensis*, discovered by Phill Mann. Photo by Diana Williams.

create a natural pond surround. Sounds easy sticking a few pebbles on, this was an epic job, and without Phill's help I would have been up the gum tree! He provided the team with wonderful lunch time snacks and kept us all in good spirits. I will always remember him with great fondness, he is a great loss to our carnivorous plant world and Rob and I have lost a true friend.

In Memory of a Grumpy Old Bugger by Barry A. Rice

Instead of telling you all how much I miss Phill, and how I lament that I won't be able to get back out into the field with him, let me share a couple of fond memories.

A few years back, my wife (Beth) and I stayed with Phill for about a week as he showed off the botanical and cultural wealth of Western Australia (Fig. 8). I recall being in the field, setting up a technically demanding macro-photograph of *Drosera menziesii*, while Phill wandered ever further off in the bush, narrating what he was seeing, all to my anguish: "Oh look Barry, a nice *Drosera zonaria*. You don't want to miss this one. Oh look, here's a good enamel orchid. Have you seen ones with this color? You really shouldn't bother with that plant you've got." Sending my blood pressure through the roof never tired him. He and his damned sense of humor!

One day Phill took us to a wet rocky outcrop with a mossy apron supporting diminutive *Drosera modesta*, *D. glanduligera*, and *Utricularia multifida*. While Beth was sprawled on the rock, photographing in a light rain, Phill pulled an umbrella out of his car—an umbrella easily 2 meters in diameter. (This is the kind of thing you might find on the patio of a café, where it would shade a table.) Even though it took several minutes to get the photograph, Phill quietly and without complaint made the event possible with that crazy umbrella.

Then there was the time he drove us to a site in the bush, and before he let me get out of the car; he made me guess the species he had brought us to see! HE WOULDN'T LET ME GET OUT OF



Figure 8: Phill with Barry Rice and Beth Salvia in field of *Drosera gigantea* and *Drosera stricticaulis* at Cranbrook, Western Australia. Photo by Beth Salvia.

THE CAR! Finally, remembering that I had mentioned—several months earlier—my favorite of all Australian sundews, I guessed... “*Drosera platypoda*????” The relief of escaping the car was quickly followed by the joy of seeing that fabulous species.

Years later, Phill and Richard Nunn visited us in the USA, and honored us by staying in our house. While I had very few carnivorous plant species in California to show him (compared to Australia), the four of us did take a rather long trek in the high mountains of the Sierra Nevada to see a floating *Sphagnum* bog with *Drosera rotundifolia* and *Utricularia macrorhiza*. Part of the hike was along a jeep trail. (I later learned this “trail” is considered an extremely technical, difficult challenge for hard-core 4WD drivers.) We met a few 4WD vehicles that were not modified for extreme off-road adventures, and as such had no place on the path. We watched them try to negotiate a particularly treacherous part, sometimes rocking so hard on the inclined rock-wall slope that they would rise onto two wheels. They should have turned back, really. But how could they, when Phill—in his strong, Western Australian accent—was telling the drivers that “the slope wasn’t too bad, it shouldn’t be a problem, I’ve been on far worse in a much lower car...” Oh, the power of intimidation that the Australian accent (especially coming from a bearded guy like Phill) has over the psyche and testosterone levels of American males...

Phill was a complex guy. He wasn’t just a naturalist, or a family man, or a former police officer. He had experienced life, and in response, life had left its mark on him. He’d be as honest telling you about his joys in life, as he’d be straightforward about some of the rough things he’d been through or seen. You didn’t have to dig very far to see a real, quality human. He was the kind of guy you just wanted to spend time with. Dammit, Phill—there’s a lot more stuff we haven’t gotten around to doing...

My Brief, Wonderful Friendship with Phill Mann by Elizabeth Salvia

Some people you just connect with right away when you meet them. You feel comfortable with them, share a sense humor, you can talk or not talk without awkwardness. I felt that from my first meeting with Phill Mann. My husband Barry Rice and I were visiting Australia about ten years ago, and so excited about seeing carnivorous plants in their native habitats. Phill invited us to come stay with him in Perth. He took us into his home and then on a five-day road trip through the area in and around Perth, and Barry and I had a chance to learn to know him a bit. He was straight spoken, thoughtful, genuine, and very, very funny. He could sleep anywhere, and often did, lying down to take naps during our extended photography stops.

He was so incredibly generous with his time. For the five days we were on that trip we were very nearly delirious with excitement at the number of plant species we were seeing, and Phill was clearly enjoying showing us the plants. He took us to so many lovely sites; to white sand dunes where we saw tiny nearly invisible sundews, to rocky slopes where we found waist-high *Drosera gigantea* in thickets, and to a spectacular *Utricularia* site—a lake of very shallow warm water, no deeper than one’s ankles, carpeted in tiny pink flowers. One of most special, fragile, and lovely sites he took us to see required a little extra work on our part. We had to wade through ocean water to get to a tiny swath of beach, carrying all of our photography gear, over treacherous and painful rock. When we got to the beach, it was tiny, barely large enough for the three of us to move around on. But this tiny, muddy beach was at the foot of a small cliff, and the cliff was smothered in *Sphagnum* and *Cephalotus follicularis*. Our feet were cold, our clothes were filthy, our hair was full of salt spray, and we were having the time of our lives.

We didn’t have the chance to visit Phill again in Australia as we had hoped we would, but we were fortunate enough to have him come visit us in California a couple of years ago, along with

Richard Nunn. We took them out to see a *Darlingtonia* bog, and also to a floating *Sphagnum* mat to see *Drosera rotundifolia*.

I didn't have the opportunity to spend nearly as much time with Phill as I wish I'd been able to, but as I said earlier, some people you just really connect with right away. I wanted to celebrate the time I was able to spend in his company, so the painting I have done of Phill (Front Cover) is kind of a collage taken from different field photos. The image of him is from recent photos I took when he and Richard stayed with Barry and me in California. The background is from earlier photos I took of the wonderful *Cephalotus* site he took us to in Australia.



petflytrap

THE ORIGINAL VENUS FLYTRAP

- Mail order and Internet U.S. sales
 - *Dionaea*, *Sarracenia*, *Nepenthes*, *Drosera*, *Pinguicula*, books, supplies, and **much** more
 - We stock **multiple sizes** of most plants
 - Terrarium kits with **live plants** (no seeds)
 - Rare nursery-grown, imported lowland/intermediate *Nepenthes*
 - Most plants shipped potted and **ready to grow!**
-

www.petflytrap.com
orders@petflytrap.com
281-433-3286

THE REHDER BOYS

JULIE REHDER • Wilmington • North Carolina • USA • JLRehder@aol.com

They were tall, lean men with drawls as thick as the sorghum once processed on the shores of the Cape Fear River in their hometown of Wilmington, North Carolina. Erect and deliberate in their strides they would bob and weave through the thickest of long leaf pine forests and complex spider webs until emerging in the bright Carolina sunlight to check on one of their favorite “honey holes” of carnivorous plants. To them these were sacred places, the indigenous home of the Venus Flytrap and other native pitcher plants. Henry and Stanley Rehder made these trips together for decades, just as their father had done before them, bending their lanky bodies over and over to record new growth in an area or to curse the developers or poachers who were destroying the remaining plants they had hoped future generations would enjoy.



Figure 1: Stanley and Henry Rehder (left to right) on Henry's front porch. Photo by Brownie Harris with permission.

Henry Rehder, the debonair commercial florist, could easily fit in the lounges of country clubs or fine European gardens as he did in the paper strewn passenger side of his younger brother's well-worn Jeep (Fig. 2.). And Stanley, the mixed plaid and stripped outdoorsman who was most at ease with a fishing pole, shovel, or straight flush in his flytrap-seed stained hands, used his skill with storytelling to keep his listeners fascinated for hours. These two brothers shared parents but not childhoods due to the decade difference in age, but they found kinship and friendship out among the Carolina Bays, especially during the twilight of their lives.

Born in 1911, Henry Burbank Rehder and George Stanley Rehder, born in 1922, were local legends when it came to plants, especially carnivorous plants. For Henry, the joy centered mostly on the beauty from stem to flower, and for Stanley, it was the bare roots and soil that stirred his excitement. Flower growing was in their DNA. Their grandmother, Johanna, arrived in Wilmington, NC from Bremerhaven, Germany during the height of the Civil War to join her new husband, Henry. To remember the beauty of her homeland, she planted flower bulbs in the modest yard located steps away from the gates of Oakdale Cemetery. Passersby noted the beauty and rarity of Johanna's flowers and asked to purchase them to place on the graves of their loved ones. Recognizing an opportunity to supplement the income of her husband's dry goods shop, she established Rehder's Florist, a business that would remain a part of Wilmington culture for four generations.

Henry and Stanley's father, Will, received his floral training in New York before returning to his hometown to expand the shop and greenhouses. For decades, "Mr. Will" served Wilmington society's needs for flowers for every occasion, but he was happiest when he took his young boys to the woods to hunt for carnivorous plants. On these long trips they would also fill the truck with southern *Smilax* to ship by train to the fine hotels in the north, or maybe search for tracks of big cats that were reported to roam the Carolina woods. During WWII, Henry served as a Merchant Marine and Stanley joined the US Army. After the war, Henry took ownership of Will Rehder Florist, the retail part of the business, and Stanley applied the horticulture skills he learned at NC State College to build Rehder's Greenhouses into a large wholesale operation. Stanley grew the mums, carnations, poinsettias, and lilies and Henry knew how to make sure every Wilmington home had a beautiful Rehder floral arrangement or potted plant. Henry's son, Henry Rehder, Jr., kept the florist tradition going after "the Rehder boys" retired and he later became a media personality and author of books on Southern gardening prior to selling the business to fulfill a lifelong desire to become a Lutheran pastor.

During their long marriage, Henry Rehder, Sr., and his wife, Barbara, created one of the community's most beautiful home gardens. Full of winding pathways with lush specimens of azaleas, camellias, and flowering trees, their spacious garden was open to the public each spring and was featured in many national and statewide magazines. Their small greenhouse contained specimens of



Figure 2: Henry and Stanley Rehder about 1993.

exotic tropical plants and their picture-perfect pocket vegetable garden was a source of great pride and fresh food for their table.

In contrast, Stanley's passion was not found within his own yard but in Fun City Farms, a multi-acre tract of land that he tended with his poker and fishing buddies (Fig. 3). Stanley and his pals grew butter beans and corn, tomatoes and cukes and using his Jeep with the FLYTRAP license plate as a mobile farmer's market he would bestow his share of the crops upon clients and pretty receptionists throughout town. He was also an accomplished surf fisherman and was happiest when "the blues were runnin'" along the Carolina shores. After a hail storm and broken furnace provided the impetus to call the greenhouse business quits, Stanley Rehder became a successful commercial realtor and continued his hunt for Flytraps and pitcher plants as he scouted places for future development.

Their father had taught them how to recognize depressions in the soil, bogs, flower spikes, and other signs of carnivorous plant life. In later years these dedicated weekend plant detectives discovered and recorded hundreds of carnivorous plant sites. As their memory of locations began to wane (remember, this was before GPS capabilities), the two brothers would take along small irrigation flags to designate special areas to alert roadside mowers to avoid their beloved plants. Always trusting, Stanley was beyond despair when these flags would steer a poacher right to the place where the Flytraps were most vulnerable. Stanley and Henry befriended dozens of homeowners in places like Boiling Springs, NC and taught them to protect the treasures in their yards. They took carloads of visitors from across the world to see the plants in the wild. While Henry regaled garden clubs with his extraordinary knowledge of camellias, azaleas, and other flowering plants, he also enjoyed categorizing all of the varieties of *Sarracenia* plants in the area and submitted for verification an unusual hybrid of *S. rubra* and *S. minor* found at a Boy Scout Camp. The Smithsonian verified its rarity and named it *Sarracenia rehderi* in his honor.

The science was not the draw for Stanley. It was the pure uniqueness of the Venus Flytrap plant and his pride in it being indigenous only to Southeastern North Carolina that made it his obsession. He spent years trying to convince any willing legislator to stiffen penalties for poaching and to categorize the plants as an endangered species. He routinely called the newspaper to request articles on the plants and to expose poachers for their deeds. He began to experiment with collecting Flytrap and *Sarracenia* seeds and started The Flytrap Company in the 1970s as a way to supplement his income but also as a way to repopulate areas that had lost plant life. He harvested seed pods, dried them in brown paper bags in his attic, separated seeds from the pods by lightly rolling them through a screen onto a cardboard box, and measured them into vials carefully marked by hand drawn numbers on adhesive tape. He also carried a video camera with him on most outings and kept notes on his discoveries in worn composition books.

In his quest to make the area known for its unique plant life, in the 1970s and 80s he contacted national television shows to pitch his stories about the strange plant only found wild in Southeastern NC. He was successful too! National morning shows, *Good Morning America* and *The Today Show*



Figure 3: Stanley and his tractor at Fun City Farms. Photo by Roy Zalesky.

plus the popular prime time show of the time, *That's Incredible*, flew him to their studios to exhibit and demonstrate the traps and pitchers. The story of his interview by Barbara Walters was one of his most-told tales because he managed to startle her into a shriek when he pulled out the live Palmetto bugs he brought to feed the plants.

In the 1970s, while looking for some land for development, Stanley discovered a boggy location in the center of one of the most populated areas of town. A roadbed had been cut but abandoned when the area was named a wetland. Two natural springs fed the bog in this natural Carolina bay. Flytraps and pitcher plants were in evidence, but he saw an opportunity to create a unique Flytrap and *Sarracenia* preserve that would be a showplace for visitors and a living laboratory for the elementary school children who were schooled in close proximity. After receiving permission from the owner to create an even better garden, he and Henry gathered and sowed seeds for more than two decades, kept the area trimmed and clean and even set up a box of brochures for visitors to identify the plants and learn about their rarity. The word was out that this spot was a must see location for nature lovers.

In 2002, the owner and the North Carolina Coastal Land Trust created a conservation easement on this property that would protect it for generations to come. Henry's death in 2004 increased Stanley's love of the place they had shared together. In April 2012, the City of Wilmington joined this amazing collaboration, when the garden was officially dedicated by the City of Wilmington as the Stanley Rehder Carnivorous Plant Garden during the Flytrap Frolic an event held by the NC Coastal Land Trust to celebrate and raise awareness about the need to preserve and protect Venus Flytraps (Fig. 4). The Garden was added to the Cross City Trail and the City of Wilmington Parks Department took over the maintenance of the property, the development of signage, and completed a parking area and overlook that enhances the area. Stanley got to see his vision for this location begin but didn't get to see its completion. He died on October 1, 2012, but his handiwork is still in evidence as the plants follow a distinctive curve along the walkways he built within the garden.

Within just a few weeks after the opening of the garden, poachers entered in the dead of night and removed about 900 Venus Flytrap plants, approximately 90% of the mature plants. This horrific



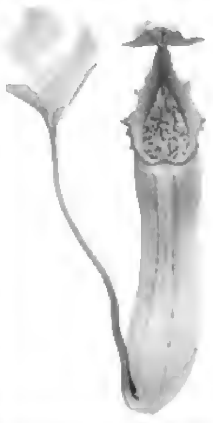
Figure 4: Stanley in his seersucker suit at the dedication of the Stanley Rehder Carnivorous Plant Garden in April 2012. Stanley died a few months later.

act has created a fury of support for greater security and scrutiny of the garden as well as cries for increased penalties for poaching and endangered status.

On September 18, 2014, North Carolina Governor Pat McCrory signed a bill making it a felony to steal Venus Flytrap plants in North Carolina. The law becomes effective on December 1, 2014.

If there is a silver lining to this tragedy it is that new leadership has emerged from Dan Sheret, a man who has the personality and passion of my father, Stanley. Since the poaching, the outpouring of support for the garden from across the world has been heartening and the garden is being rebuilt. Dan's propagation and planting, the City's stewardship, the owner's generosity, and the NC Coastal Land Trust's leadership have been critical parts of a preservation puzzle.

Today the Stanley Rehder Carnivorous Plant Garden thrives. Plan a trip to Wilmington, North Carolina, especially during the growing season, and view for yourself how a couple of brothers made their passion a community treasure.



CASCADE CARNIVORES

Carnivorous Plant Nursery

- ***Drosophyllum lusitanicum***
 - Yes, we ship Dewy Pine plants - live delivery guarantee
- ***Nepenthes***
 - highland species are our specialty
- ***Drosera, Pinguicula, Utricularia, Byblis, Heliamphora, VFTs and more***

Visit us on the web - www.cascadecarnivores.com
phone - 425.336.1420 email - support@cascadecarnivores.com

VARIATION IN *DROSERA PYGMAEA*

ROBERT GIBSON • 5 Kristen Close • Cardiff Heights • NSW 2285 • Australia • robert.gibson@environment.nsw.gov.au

Keywords: *Drosera pygmaea*, variation.

Introduction

Drosera pygmaea DC. grows naturally across wetter parts of southern Australia and also occurs in New Zealand (Lowrie 1989; Salmon 2001), making it the most widespread of all pygmy sundews. It is aptly named thanks to its small size which makes it easy to overlook and challenging to study. However the effort to study this species has revealed some interesting morphological variation which is discussed here.

Typical Plants

Drosera pygmaea plants are typically 10 to 15 mm across when mature and have short, erect single-flowered scapes with flowers with four sepals, four white petals and four stamens. The flowers remain erect in fruit. The leaves have filiform petioles which are usually olive green to red and orbicular lamina, with a peltate attachment to the petiole which also may be olive green or red. The elongated silvery white stipules form a prominent conical bud that protects the new growth from desiccation and usually opens in April to July when gemmae are produced.

Variation in Pigmentation

Golden green plants are known from a few populations, notably in the Little Desert and at Lake Kai Iwi in the North Island of New Zealand (Salmon 2001). These plants dominate at both locations and have red glands in their insect-trapping hairs which demonstrate that they are not albinos (Fig. 1).

The petals of *D. pygmaea* are usually pure white with a translucent broad trilobed mid-vein at the base. However, in some populations, such as near Queenstown in Western Tasmania (Gibson 1998), Mulgoa, New South Wales and Lake Ohia in New Zealand the mid-vein has red pigment. In some cases the same bicolored effect is produced by red pigment from the inner surfaces of the sepals showing through the translucent mid-vein of the petals; in both cases to produce the color contrast pattern found in several other pygmy sundews that is likely to play a role in influencing insect behavior so they may more effectively cross-pollinate these flowers.

Variation in Flower Part Numbers and Number of Flowers per Scape

The vast majority of flowering plants of *D. pygmaea* I have seen across its range have the typical four-merous radial symmetry of the flowers. However, plants with five-merous flowers occur sporadically in wild populations and in cultivated plants. I was made first aware of this by a photo published on page 65 of Kondo and Kondo (1983: see the flower on the far-right of their photo).

Drosera pygmaea plants rarely also produce scapes that may have up to seven flowers in a one-sided raceme. In this case the pedicels are up to 2 to 3 mm long and the flowers remain erect in

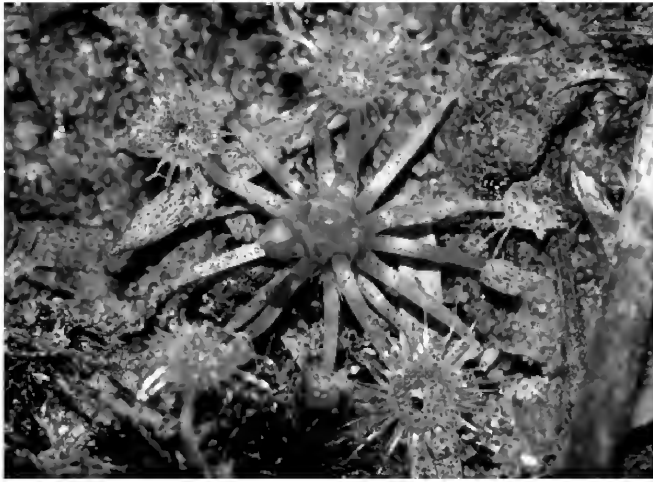


Figure 1: Yellow-green plant of *Drosera pygmaea* in scape at Lake Kai Iwi, North Island, New Zealand. Note the presence of red pigment in the gland of the insect-trapping hairs that show that this is not an albino.

Figure 2: Atypical five-merous flower of *D. pygmaea* on an even rarer multi-flowered scape. The white (rather than yellow) anthers and pollen most readily distinguish this plant from being *D. occidentalis* subsp. *australis*.

fruit. Sometimes some of the flowers in this inflorescence are also five-merous (Fig. 2). I have observed such plants near Gosford and in the Blue Mountains in New South Wales and in South East Queensland. They bear strong resemblance to plants of *D. occidentalis* subsp. *australis* from South Western Australia (Lowrie 1989), but can be readily distinguished by anther and pollen color and the degree of stipule division. In all cases these *D. pygmaea* plants with anomalous flowers and scapes predominantly produce one-flowered scapes of four-merous flowers which indicate that these anomalies are temporary, perhaps caused by errors in cell division.

Conclusions

Drosera pygmaea is a small and widespread sundew that is commonly overlooked and difficult to study due to its small size and brief flowering period. However in its range are some unusual variants, some of which are fleeting in nature.

Acknowledgements: Thanks to Richard Davion for initial discussions about morphological variation in this species and also to Greg Bourke, Andrew Broome, Kirk ‘Fuzzy’ Hirsch, Paul Lander, Bruce Pierson, Brian Quinn, Bruce Salmon, and Peter Sebborn for assistance with fieldwork in which I have been able to observe this species in many parts of its range.

References:

Gibson, R. 1998. Observations on a selection of Tasmanian carnivorous plants. *Carnivorous Plant Newsletter* 27(3): 90-92.

Kondo, K., and Kondo, M. 1983. *Carnivorous Plants of the World in Color*. Ienohikari Association, Tokyo.

Lowrie, A. 1989. *Carnivorous Plants of Australia: Volume 2*. University of Western Australia Press, Nedlands.

Salmon, B. 2001. *Carnivorous Plants of New Zealand*. Ecosphere Publications, Auckland.

PYGMY SUNDEWS – PROPAGATION AND CULTIVATION

GREG BOURKE • Australia • orders@captiveexotics.com

Pygmy sundews (*Drosera* sections *Bryastrum* and *Lamprolepis*) are a rewarding group to cultivate. As the name suggests, these plants are small in stature with all species 3 cm in diameter or smaller and rarely reaching more than 5 cm in height. Despite their small size, pygmy sundews produce comparatively large flowers, often larger than the plant! They're also very colorful, coming in white, yellow, pink, metallic orange, red, and every color in between (Fig. 1). However, it's not just the small size that differentiates this group from other sundews. They produce large stipule buds during the hot, dry summer period when they are effectively dormant and they produce small vegetative buds called gemmae to assist with rapid reproduction in autumn.

Many of the 58 currently recognized species and a number of manmade and natural hybrids are easily grown in a variety of potting mixes. The soils of the south west of western Australia where these plants occur are incredibly complex with areas dating back well into the Precambrian era. As these have weathered, dozens of different substrates have been exposed. This has driven the diversification of the plant species including the sundews. In saying this, we can loosely group the soil types the pygmy sundews occur in. The sands comprised of silica, quartz, and a variety of mineral sands occur through the region. These are as varied as the species that occur on them and home to the greatest number of species. Laterite soils are also varied in composition and harbor a range of species. Peaty soils are less common and just a few species occur on them. Although the peat-based soils are least common, in pot culture they are considered the most successful. A 50/50 mix of clean silica or quartz



Figure 1: One of the many color forms of *Drosera pulchella*.

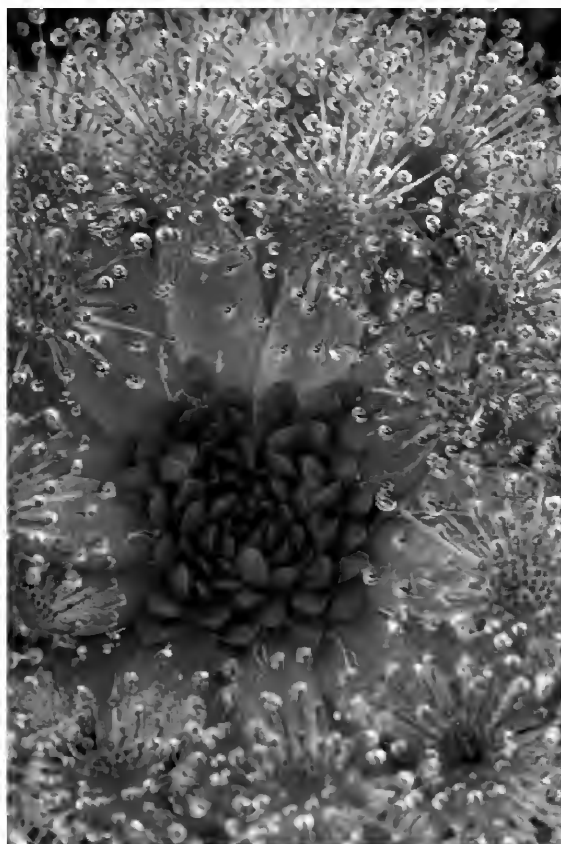


Figure 2: *Drosera pulchella* with ripe gemmae.



Figure 3: The completed gemmae collector.

sand (preferably round rather than angular) with peat works well. Perlite can also be added to the mix to reduce weight and cost. Pure peat can also be used but in my experience this is not ideal.

Pygmy sundews can be grown in tiny bonsai pots on sunny windowsills or large pots outdoors or in a glasshouse. In my opinion, they look their best when grown in a large pot in full sun as this is where they look most natural. Watering can be done from above or via a tray and they can be kept moist year round. In the wild, temperatures range from below freezing on Bluff Knoll where *D. pulchella* occurs at close to 1000 m asl to 40 degrees C. in the height of summer. Replicating these temperatures in pot culture is dangerous and will almost certainly result in a reduced life span. Temperatures are best kept cool (5-15 degrees above freezing) in autumn and winter to induce good gemmae production and a little warmer in spring and summer.

Propagation can be achieved with seed, but as these plants produce few seeds, the easiest way is by collecting and spreading gemmae (Fig. 2). The clonal gemmae allow plants to rapidly reproduce in autumn. A single plant can produce almost 200 gemmae in a single season, and these can mature to flowering in as little as 3 months (Pers. obs.).

Collecting the gemmae can be done several different ways, but I have found that using an aspirator is by far the easiest way. An aspirator can be made at home using any airtight plastic jar with lid, 60 cm of clear plastic flexible tube (6 mm fishtank air hose is perfect), and a small piece of fine gauze (stockings are perfect). For my gemmae collector, I used a 50 ml plastic test tube. In the lid I drilled two holes, one drill size smaller than the flexible tube. I cut the flexible tube into two lengths, one 20 cm long and the other 40 cm. The shorter length is pushed through the hole in the test tube lid just 2 cm inside. Over the end that will end up inside the test tube, I tied a small piece of stocking. This is critical as it prevents any particles including gemmae from entering your lungs! The second, longer piece of flexible tube is pushed through the lid so it will end up 2/3 of the way down the tube. Now, simply screw the lid on the test tube and you are ready to suck off your first pygmy sundew gemmae (Fig. 3). With the end of the short tube in your mouth and the end of the long tube in your hand, you can simply suck the gemmae off your plants without any damage to the plant or the gemmae (Fig. 4). Try to avoid touching the sticky leaves as this will get inside the flexible tube and gemmae will become stuck.



Figure 4: *Drosera micrantha* with gemmae removed.



Figure 5: Sprouting gemma of *Drosera barbigera*.



Figure 6: The rare *Drosera oreopodion*.

Once the gemmae is collected, it can be stored in a refrigerator for up to three weeks, but is best sown fresh on the surface of wet media (Fig. 5). Keep freshly sown gemmae damp to wet until plants are well developed. I usually mist from above regularly for the first month.

Generally plants flower in spring and summer although I have had plants in flower year round. Flowers of different species also generally open on the same day triggered by bright light. This is when a large pot with dozens of plants is a stunning sight (Fig. 6). Very few seeds are produced by pygmy sundews and given the ease of production by gemmae, not really worth collecting as they can be challenging to germinate.

Pygmy sundews are in cultivation around the world and many of the 58 currently recognized species and a number of natural and manmade hybrids are available. If you get the opportunity to grow these delightful little sundews give them a go. I'm sure you will not be disappointed.

References:

D'Amato, P. 2013. The Savage Garden. Ten Speed Press, New York.

Lowrie, A. 2014. Carnivorous Plants of Australia Magnum Opus. Redfern Natural History Productions, Poole, England.

Carnivorous Plant Nursery

*Promoting environmental stewardship through
engaging educational materials and low-cost, high-quality carnivorous plants.*



- Carnivorous Plants
- Bog Orchids, Bog Plants
- Live Wingless Fruitflies
- Activity Book for Carnivorous Plants
- Bugs in the Bog Board Game
- Free Monthly Drawing
- Online Shopping and Mail Order

www.carnivorousplantnursery.com

301-824-0133 | info@carnivorousplantnursery.com | 13763 John Cline Road, Smithsburg, MD 21783

NEW CULTIVARS

Keywords: cultivar, *Dionaea* ‘Sirius’, *Sarracenia* ‘Eva’, *Sarracenia* ‘Vogel’.

Dionaea ‘Sirius’

Submitted: 25 March 2014

I found *Dionaea* ‘Sirius’ in April 2012 at Karnivores located in Colmar, France. The plant was labeled “dentate clone 2”.

Dionaea ‘Sirius’ differs from *Dionaea muscipula* ‘Blanche Hermine’ in a number of important ways. *Dionaea muscipula* ‘Blanche Hermine’ is all white and because of a deficiency of chlorophyll is a slow grower. In contrast, the early spring traps of *Dionaea* ‘Sirius’ start with a red/pink color (Fig. 1). As the season progresses, the color of new traps fade gradually, becoming white during summer. Only the traps become white. The petioles stay green, which permits the plant to remain vigorous from photosynthesis.

I named this cultivar ‘Sirius’, the brightest white star.

The unique characteristics of *Dionaea* ‘Sirius’ remain stable with rhizome division and must be propagated vegetatively.

—CHRISTOPHE BOITEUX • Besançon • France • chris.boiteux@live.fr



Figure 1: *Dionaea* ‘Sirius’. Note the red/pink colored early spring trap in the lower center of the left photo. Later in the season, the traps are white with green petioles.

Submitted: 22 August 2014

About 7 years ago René van Kessel from Carniflora nursery, The Netherlands, was happy to inform me about two new *Sarracenia* cultivars he had made; “Among the various resulting seedlings, I observed 2 samples from different batches and selected them for further observation”. When they showed promising features they were taken into tissue-culture from where they have been multiplied. Both cultivars, *Sarracenia* ‘Vogel’ and *S.* ‘Eva, have successfully been made available for the past three years.

While the exact parentage of *Sarracenia* ‘Vogel’ is unknown, both *S. flava* and *S. purpurea* subsp. *venosa* var. *burkii* influence are present and back-crossing may have been involved due to visual characteristics. This stout, solid cultivar produces 5-7 new leaves about 28 cm tall throughout the season, lasting up to 7 months. The bulging pitchers are green with red longitudinal veins and more heavily veined in the upper part. The large wide hood is heavily veined but more pronounced on the inner side, with a slight undulated margin while the inner surface is abundantly covered with little bristly hairs (Fig. 2). The interior of the hood develops a red coloration with darker veining, while the outside stays mainly green making it most distinctive. The pitcher tube and especially the interior of the hood become suffused with red as it matures, while the green exterior of the hood becomes a background for red veining only.

This cultivar looks somewhat like a *S. × catesbaei* cross but with the sides of the large broad hood clearly folded inwards, giving the plant a robust and almost bizarre appearance. The flower petals are pale yellowish-green, but may show occasional pink highlights while the scent is typical and strong reminding of *S. flava*.

The cultivar’s name honors Mr. Art Vogel in celebration of his retirement as hortulanus of the Leiden Botanical Garden in The Netherlands, and because of his great interest and knowledge of carnivorous plants.

Sarracenia ‘Vogel’ must be reproduced vegetatively to preserve the characteristics of the cultivar.

—HANS LUHRS • Krayenhoffstr. 51 • 1018RJ Amsterdam • The Netherlands • hanlu050@gmail.com



Figure 2: *Sarracenia* ‘Vogel’, not yet fully colored. Photos by Mascha Hendricks.

Submitted: 22 August 2014

Although the exact parentage of *Sarracenia* ‘Eva’ is unknown, according to the given information, one of the parents is most likely a *S.* ‘Juthatip Soper’, a *S.* \times *mitchelliana* back-crossing with *S.* *leucophylla*. Much of the latter’s features are well visible in this cultivar, producing 6-8 new leaves up to 28 cm long throughout the season and lasting for as long as 7-8 months. They taper gradually from bottom to top to produce a broad cone with a wide almost heart-shaped hood, of which the side lobes are somewhat folded backwards while the inner surface is abundantly covered with little bristly hairs. The pitchers are primarily green, apart from a few red longitudinal veins, with whitish-pink fenestrations in the upper part below the mouth. The hood is very white fenestrated onto a light green background with red veins pronounced on the inner side of the hood (Fig. 3). As the pitchers mature the color in the upper part becomes dark pink, especially the interior and the mouth, while the green inner side of the hood becomes a background for dark red veins. The combination of a dark pink upper part of the pitcher and white-mottled green hood gives this cultivar a unique appearance. The flower petals are deep red.

The cultivar’s name was chosen to honor the late Mrs. Els Vogel-Adamse for her culinary adventures during board meetings of the Dutch carnivorous plant society as well as her work behind the scene. She also had used this name to sign her outstanding Ndebele paintings.

Sarracenia ‘Eva’ must be reproduced vegetatively to preserve the characteristics of the cultivar.

—HANS LUHRS • Krayenhoffstr. 51 • 1018RJ Amsterdam • The Netherlands • hanlu050@gmail.com

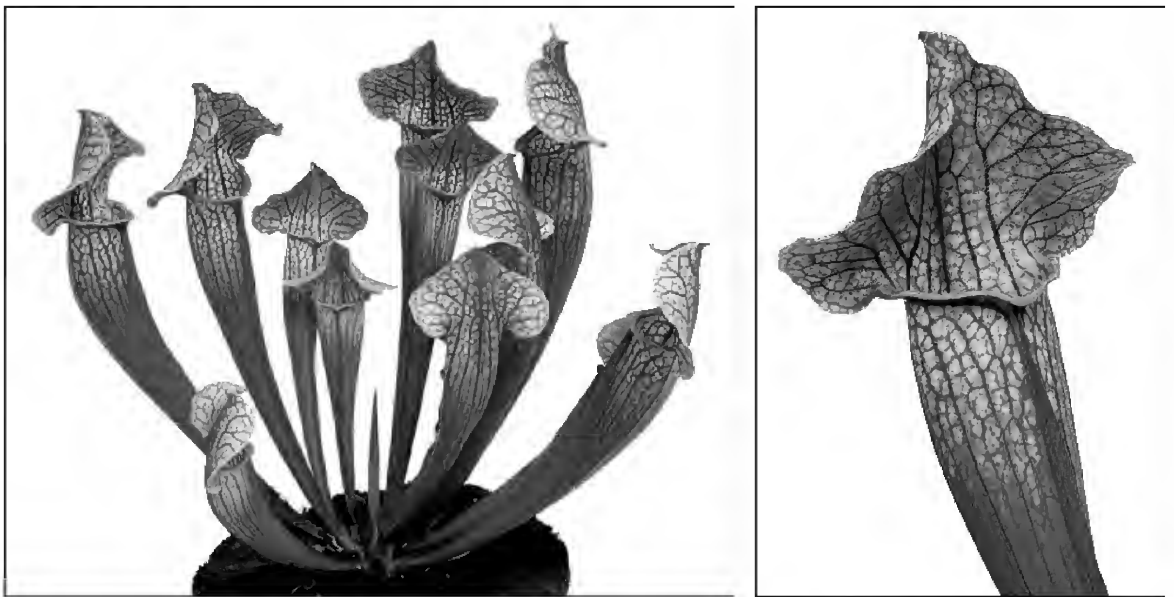


Figure 3: *Sarracenia* ‘Eva’. Photos by Mascha Hendricks.



THE
ICPS SEED BANK
an exclusive member benefit

The International Carnivorous Plant Society offers its members exclusive access to a variety of carnivorous plant seeds. Seeds are ordered online at the ICPS Store:

<http://icps.clubexpress.com>

The Seed Bank cannot exist without seed donations. Information about growing carnivorous plants from seed and donating seeds to the Seed Bank are at the ICPS public web site:

<http://www.carnivorousplants.org>

If you do not have access to the Internet, please send seed order form requests to:

International Carnivorous Plant Society, Inc.
2121 N. California Blvd., Suite 290
Walnut Creek, CA 94596-7351, USA

JOHN BRITTNACHER, Seed Bank Manager, john@carnivorousplants.org

C

Z

P

WWW.CZPLANTS.COM

carnivorous & exotic plants

CALIFORNIA

CARNIVORES

The Largest Most Famous CP Nursery in North America

Home of the largest collection of CP in the world on display Thurs. - Mon. 10 Am - 4 Pm

We ship only the highest quality plants in our deluxe pots to the entire U.S.

Owned by Peter D'Amato, author of "The Savage Garden"

707-824-0433

www.CaliforniaCarnivores.com

info@californiacarnivores.com

